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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,852	03/24/2004	Lizhong Sun	026-0045	5481
22120	7590	03/10/2006	EXAMINER	
ZAGORIN O'BRIEN GRAHAM LLP 7600B N. CAPITAL OF TEXAS HWY. SUITE 350 AUSTIN, TX 78731			LE, DINH THANH	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/807,852	<b>Applicant(s)</b> SUN ET AL.	
	<b>Examiner</b> DINH T. LE	<b>Art Unit</b> 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-9,11-14,16,17,19-22,24,25,27,28,30-34 and 36-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,7,11-13,19-21,27,28,30,34,36 and 39-41 is/are rejected.
- 7) ☒ Claim(s) 6,8,9,14,16,17,22,24,25,31-33,37 and 38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/16/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## NON-FINAL REJECTION

The rejections under 35 USC 112, second paragraph, and over Hassoun in view of Kimura (US 3,813,610) are withdrawn in view of the amendments to the claims.

The prior art reference newly found necessitated a new ground of rejection as below:

### *Claim Rejections*

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-12 and 19 are rejected under 35 USC 102 (e) as being anticipated by Magoon et al (US 6,970,025).

Magoon et al discloses in Figure 2B-2D a divider circuit comprising:

- a sequence of divide stages (1-4) coupled to provide a plurality of difference divide ratios;
- a multiplexer (9);
- a programmable control signals (15a-15d); and
- wherein one or more of the divider stages (1-4) is turned off by switches (not shown) when not used for a programmable divide ratio, see lines 35-48, column 6.

With regard to claim 19, the divider can be selected to have a divide ratio of 1/4 since it comprises 4 dividing stages (1-4)..

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7, 13, 20-21, 27-28, 30, 34, 36 and 39-41 are rejected under 35 USC 103 (a) as being unpatentable over Magoon et al (US 6,970,025) in view of Ahn et al (US 6,952,125).

Magoon et al discloses in Figures 2B-2D a divider circuit comprising all of the limitations of the claimed invention as stated above but does not disclose a duty cycle correction stage coupled to at least one of the divide stages to correct an output of at least one of the stages having an odd divide ratio.

Ahn suggests in Figure 7 a divider circuit comprising a duty cycle correction circuits (72, 74) coupled to the divide stages (73, 75) for cleaning up the output by removing sub-harmonics, see lines 25-30, column 11.

It would have been obvious to a person having skill at the time the invention was made to employ the duty cycle correction circuit as suggested in the circuit of Magoon et al as suggested by Ahn et al for the purpose of removing sub-harmonics.

***Allowable Subject Matter***

Claims 6, 8-9, 14, 16-17, 22, 24-25, 31-33 and 37-38 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

These claims are allowed because the prior art of record does not show the self-correction logic and the duty cycle correction stage comprising a logic as combined in these claims.

***Response to Applicant's Arguments***

The applicant's arguments over Kimura (US 3,813,610) and Hassoun are persuasive without traverse.

***Conclusion***

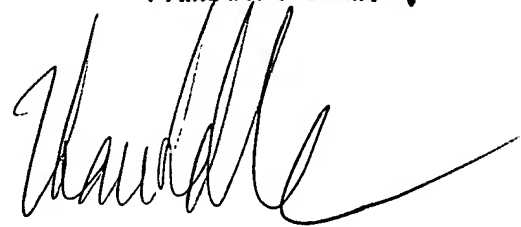
Any inquiry concerning this communication or earlier communications from the examiner should be directed to DINH T. LE whose telephone number is (571) 272-1745. The examiner can normally be reached on Monday-Friday (8AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY CALLAHAN can be reached at (571) 272-1740.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**DINH T. LE**  
**PRIMARY EXAMINER**

A handwritten signature in black ink, appearing to read 'Dinh T. Le', with a long horizontal flourish extending to the right.